

WILDLIFE HARVEST AND POPULATION STATUS REPORT

NORTHERN BOBWHITE – 2009

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QUAIL ABUNDANCE

Conservation Agents conducted roadside counts of bobwhite quail from August 1-15 in 110 of Missouri's 114 counties. Clay, Jackson, St. Louis, and St. Charles counties are not included because they are high density urban areas near Kansas City and St. Louis. Surveyors count the number of quail observed while driving ≤ 20 miles per hour along permanent 30-mile gravel road routes. Participants are instructed to conduct counts beginning at sunrise on clear, dewy mornings with light winds to increase chances that bobwhite will be near roadsides. These observations are used to provide an index of quail abundance across the landscape. Because only a small portion of each county is sampled, the index best represents quail population trends at large scales, such as statewide and multi-county blocks such as the zoogeographic region. The statewide long-term trend of the index closely follows other statewide indices of abundance, including the North American Breeding Bird Survey (BBS) and Missouri quail harvest estimates. The roadside survey routes are run almost entirely through private land, so the quail index is a reflection of conditions on Missouri's private lands.

This year's statewide index of 2.7 quail per 30 mile route is 7% below last year's index of 2.9. This is 19% below the 5-year average (2004-2008) and 26% below the 10-year average (1999-2008) (Table 1). Production appeared to be low this year at the time of the survey, with the statewide average chick count at 0.8, which was the same as last year. Total quail counts were variable among zoogeographic regions with counts being highest in the Northwest Prairie (4.2), followed by the Western Ozark Border (3.9) and the Western Prairie (3.0). Counts were lowest in the Northern and Eastern Ozark Border (1.3) and the Mississippi Lowlands (1.4) (Table 1). Statewide long-term trends (1983-2008) are shown in Figure 2 and trends by zoogeographic region are shown in Figure 3. Both figures illustrate a long-term downward trend in bobwhite populations.

Winter weather was fairly mild this year, with above normal temperatures and below normal precipitation across most of the state. An unusual warm spell in February saw temperatures reaching 70° F. A severe ice storm event moved across southeast Missouri from January 26-28 resulting in widespread damage to trees and buildings. Spring 2009 brought cooler than normal temperatures and another year of higher than normal precipitation. While precipitation amounts were lower than those of spring 2008, the weather was still not conducive to good reproduction. A drier August may have provided some opportunities for late-season nesting attempts.

Habitat conditions in Missouri vary from good to poor throughout the state. Over-grazed, fescue-dominated pastures, loss of native grass stands, removal of low growing, dense woody cover, and increased commodity prices have all led to losses in preferred bobwhite habitat. Many programs are in place to assist private landowners in improving bobwhite habitat on their property, including the USDA Conservation Reserve Program (CRP), Conservation Buffers for Upland Birds (CP 33), MDC programs, and habitat programs from organizations including Quail Unlimited and Quail and Pheasants Forever.

TABLE 1. Average number of quail counted per 30-mile route by Conservation Agents along 110 routes during August 1-15, 2008.

Zoogeographic Region¹	# of Routes In 2009	Quail counted 2009	Quail counted 2008	Long Term Average 1983-2008	% CHANGE from Long-Term Average	% CHANGE 2008 to 2009
Northwest Prairie	11	4.18	2.82	7.87	-46.9%	48.4%
Northern Riverbreaks	11	2.91	2.40	7.84	-62.9%	21.2%
Northeast Riverbreaks	20	2.70	4.95	9.59	-71.9%	-45.5%
Western Prairie	12	3.08	3.08	15.50	-80.1%	0%
Western Ozark Border	13	3.92	2.45	6.88	-43.0%	59.8%
Ozark Plateau	24	2.00	3.17	2.98	-32.8%	-36.8%
Northern & Eastern Ozark Border	12	1.25	0.67	2.77	-54.9%	87.5%
Mississippi Lowlands	7	1.43	0.86	5.73	-75.0%	66.7%
Statewide	110	2.66	2.88	7.21	-63.1%	-7.5%

¹See figure 1.

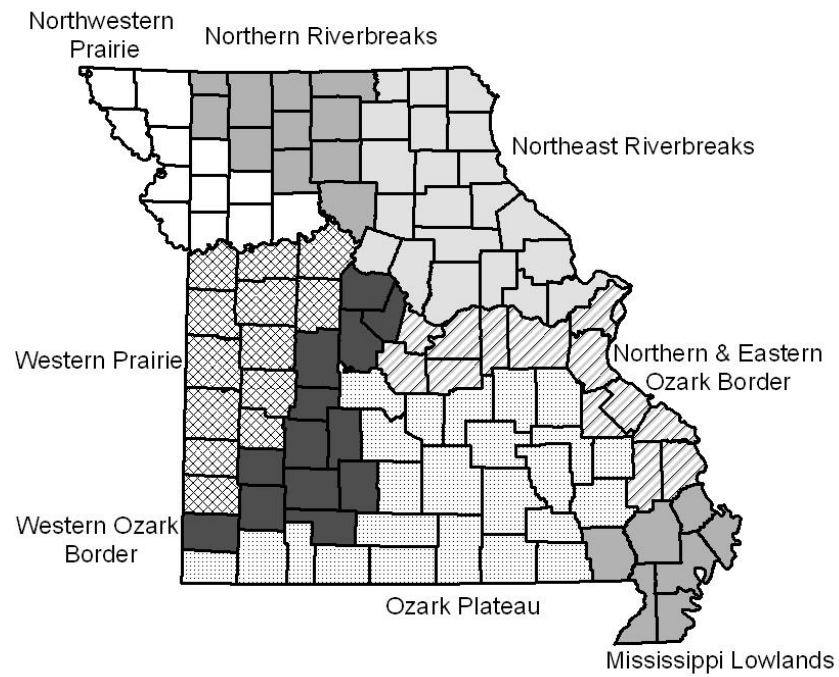


FIGURE 1. Zoogeographic regions of Missouri.

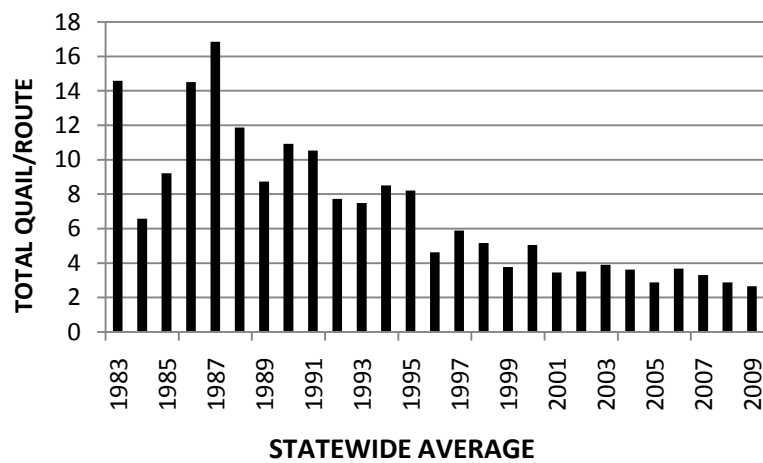


FIGURE 2. Statewide average number of quail counted per route from 1983-2009.

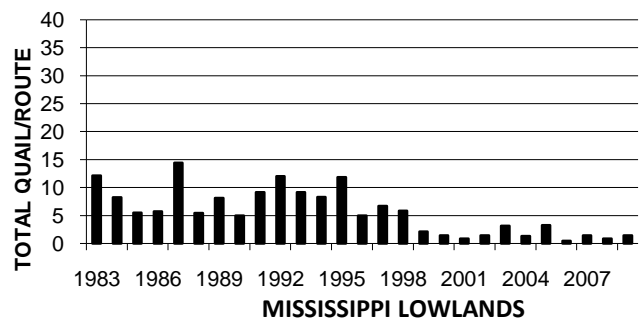
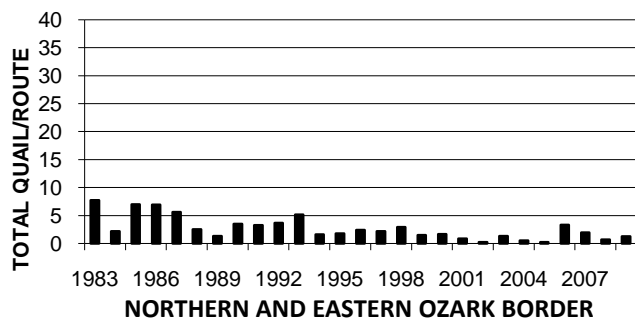
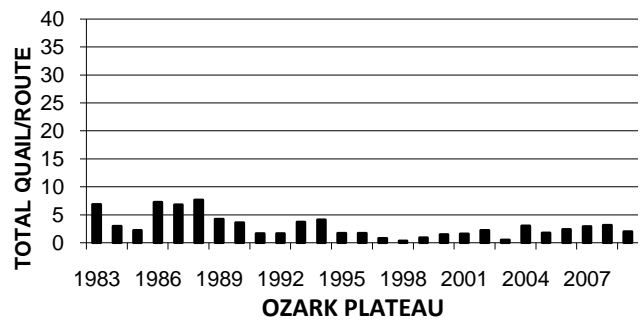
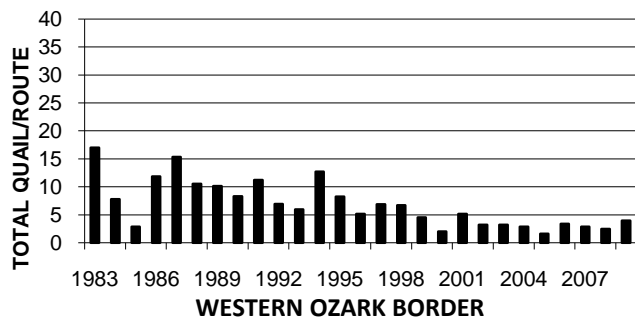
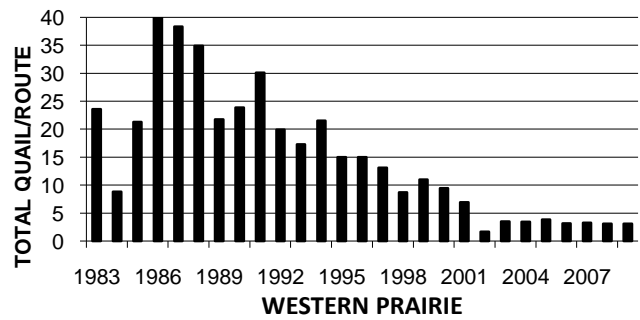
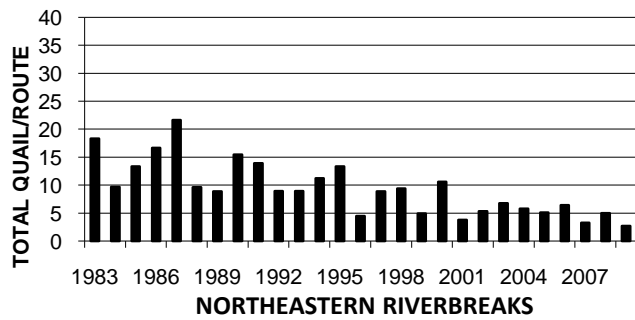
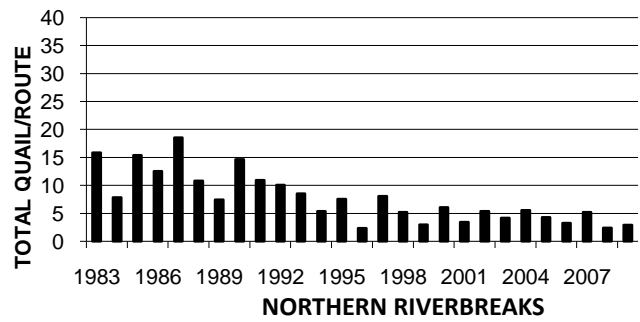
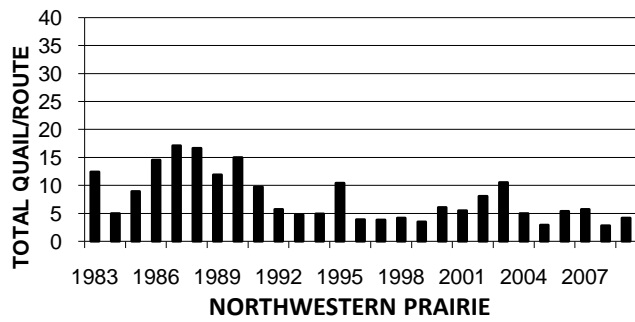


FIGURE 3. Mean number of quail per 30-mile route by zoogeographic region from 1983-2009.

2008 HUNTING SEASON

MDC collects harvest information from a post-season mail survey of a random sample of Missouri small game permit holders to estimate hunting activity at regional and statewide scales. The 2008 season (November 1, 2008 to January 15, 2009) again showed a decrease in both the number of quail hunters and quail harvest. The number of quail hunters during the 2008 season was 21,459, which was 21% lower than the 27,830 hunters from the 2007 season. This was the 3rd largest drop in hunter numbers since 1967. The total number of birds harvested in 2008 was 191,172, a 23% decrease from the 2007 season when hunters harvested 258,448 birds (Figure 4). An estimated 1,408 individuals participated in the youth quail season in 2008. While the numbers of hunters and birds harvested continue to decline, the number of birds bagged per day (a statewide index of hunting success) remains relatively stable. The number of birds bagged per day was 1.5 in 2008 compared to 1.6 in 2007. In the 2008 season, quail hunters averaged 6 days afield and had an average season bag of 8.9 birds. Overall hunters spent 129,210 total days afield in 2008.

Missouri Quail Hunting Trends 1967-2008

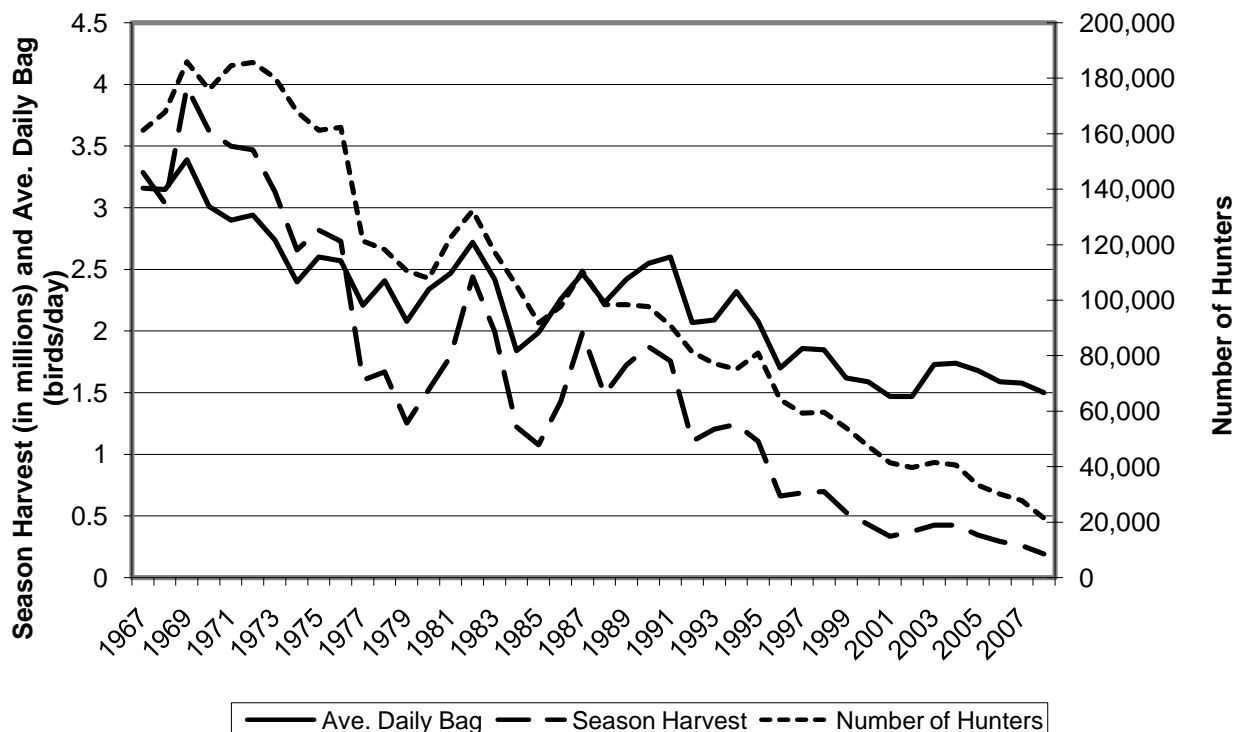


FIGURE 4. Missouri quail hunting trends from 1967-2008. Hunting season bag in millions and daily bag (birds/day) are combined on the left axis. The right axis shows the number of hunters per year.